

PROGRAM DIRECTIVE

TR-xxxx (New x/xx/2000)

D. Smith

TRAFFIC OPERATIONS POLICY DIRECTIVE		NUMBER 01-03	PAGE 1 OF 2
JOSEPH HECKER, ACTING DIVISION CHIEF, TRAFFIC OPS (Signature) <i>Joseph Hecker</i>		DATE ISSUED 06-01-01	EFFECTIVE DATE 06-01-01
SUBJECT LEFT-TURN EXTINGUISHABLE MESSAGE SIGN		DISTRIBUTION <input type="checkbox"/> All District Directors <input checked="" type="checkbox"/> All Deputy District Directors - Traffic Operations <input checked="" type="checkbox"/> All Deputy District Directors - Maintenance <input checked="" type="checkbox"/> All Deputy District Directors - Construction <input checked="" type="checkbox"/> All Deputy District Directors - Project Development <input type="checkbox"/> All Deputy District Directors - Planning <input checked="" type="checkbox"/> Division Chief, Division Engineering Service Center <input checked="" type="checkbox"/> Legal Division _____ <input type="checkbox"/> All Headquarters Division Chiefs For _____	
DOES THIS DIRECTIVE SUPERSEDE ANOTHER DOCUMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		IF YES, DESCRIBE	
WILL THIS DIRECTIVE BE INCORPORATED IN THE TRAFFIC MANUAL? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		IF YES, DESCRIBE Section 9-03.8 Permissive Left-Turn Phasing	

DIRECTIVE

This directive is to notify Caltrans Traffic Operations personnel that Traffic Manual Section 9-03.8, Permissive Left-Turn Phasing is revised to allow local agencies to install an Extinguishable Message Sign (EMS) "Left Turn Yield" in lieu of the "Left Turn Yield On Green Ball" (R73-7) sign. The text in the Traffic Manual is revised as noted in the underlined portion of the attached page.

Both the Traffic Manual and the Federal Manual on Uniform Traffic Control Devices state that when a protected-permissive or permissive protected left-turn phasing operation is used for a traffic signal on a street or highway, no information sign is necessary.

If a sign is used on a State highway, it shall be an R73-7, LEFT TURN YIELD ON GREEN (Green Ball Symbol) sign. An EMS shall not be used at an intersection with a State Highway

In lieu of the R73-7 sign, local authorities may use an EMS. The message shall say LEFT TURN YIELD. Letters shall be at least 150 mm (6-inch) in height. The light source shall be designed and constructed so that when illuminated, the message shall be white and remain dark when not in use. The message shall be illuminated when only the green permissive ball is lighted.

IMPLEMENTATION

Caltrans policy and practice in the use of the R73-7 "Left Turn Yield on Green" sign on state highways remains unchanged. Local authorities may use an EMS on local street and roads.

Between 1996 and 1999 the City of San Jose experimented with an extinguishable message left turn yield sign. The City concluded that the illuminated sign provided a benefit over the R73-7 sign and reported this to the California Traffic Control Devices Committee (CTCDC). The CTCDC recommended that Caltrans include language in the Traffic Manual which makes the EMS an official traffic control device in California.

EMSs are not to be used on State Highways at this time for two reasons:

1. The San Jose experiment was limited in scope and did not provide conclusive evidence regarding safety/operational benefit; and,
2. Traffic signals mast arms on State Highways may not have been designed to withstand the additional dead load and wind load caused by an EMS.

Caltrans does not have a Standard Plan for this EMS.

Attachment

9-03.8 Permissive Left-Turn Phasing

This type of operation allows vehicles to make left turns during a fully-protected interval with a green arrow indication, or to make a permissive left turn with a circular green indication when there are adequate gaps in opposing traffic. Permissive left turn phasing may be either pre-timed or traffic actuated. Examples of the operation may be found in the Traffic Control Devices Handbook (FHWA).

There are normally two sequences that can be utilized with permissive left turn phasing:

1. *Protected-Permissive.*

With this operation, left turn traffic is first directed to turn left on the display of a green arrow and then permitted to turn during the nonprotected interval on the display of a circular green.

2. *Permissive-Protected.*

With this operation, the left turn traffic is first permitted to turn during the nonprotected interval on the display of a circular green and then directed to turn left on the display of a green arrow.

The advantages of this operation when compared to fully-protected left turn phasing only are:

1. Reduces delay as left turn drivers may have an opportunity to make their left turns during the green interval or yellow change interval for through traffic.
2. Allows the use of shorter cycle lengths in coordinated systems by reducing the time of the fully protected green interval for the left turn movement.

3. Less chance of disrupting traffic in adjacent through lanes as left turn queues are less likely to exceed the length of the left turn lane.

When a protected-permissive or permissive-protected left-turn phasing operation is used for a traffic signal on a street or highway, no information sign is necessary.

If a sign is used on a State highway, it shall be a R73-7, LEFT TURN YIELD ON GREEN (Green Ball symbol) sign.

In lieu of the R73-7 sign, local authorities may use an extinguishable message sign. An extinguishable message sign shall not be used at an intersection with a State highway. The message shall say LEFT TURN YIELD. Letters shall be at least 150 mm in height. The light source shall be designed and constructed so that when illuminated, the message shall be white and remain dark when not in use. The message shall be illuminated when only the green permissive ball is lighted.

The following shall apply to permissive left-turn phasing:

1. This operation shall not be initiated where the left turn accident warrant is satisfied.
2. Signal faces should not be placed in a median facing a left turn lane.
3. Signs are not required for this operation unless U-turns are to be prohibited.
4. Both directions of through traffic shall be terminated simultaneously except where opposing left turns or opposing U-turns are prohibited.